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## (54) SOLID POLYMER TYPE FUEL CELL

## (57) Abstract:

**PROBLEM TO BE SOLVED:** To prevent a catalyst layer and an ion exchange resin film from drying by including a first water-absorptive region exposing inside a gas feeding side manifold, a second water-absorptive region exposing inside a gas exhausting side manifold, and a third water-absorptive region for connecting the first and second water-absorptive regions with each other in a cell.

**SOLUTION:** Since water is produced by a battery reaction in a cathode, an oxidizer gas abuts on a catalyst layer 9 and is humidified so that it becomes one containing a considerable quantity of water in a gas exit manifold. When it passes a water-absorptive sheet 11 of an ion exchange resin film/electrode joint body 2 corresponding to the position of the gas exit manifold, the water is absorbed. The absorbed water moves inside the water-absorptive sheet 11, and the water-

absorptive sheet 11 corresponding to the position of the gas exit manifold is brought into a state containing water as well. Therefore, since a gas successively passing a gas entrance manifold is humidified, the catalyst layer 9 and the ion exchange resin film 8 abutting on the gas keep a certain quantity of water without having the water taken away.

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